

Remarks

In the August 12, 2003 Office Action, claims 36 through 43 were finally rejected under 35 USC 103 as being obvious over Sugimoto et al. (US 5,762,709, hereinafter the '709 patent) in view of Kimura (US 5,578,127, hereinafter the '127 patent), while claims 37, 38 and 43 were rejected under 35 USC 112, first paragraph for failure to comply with the written description requirement. In response to the Applicants' amendment filed on September 8, 2003, wherein claims 37, 38 and 43 were cancelled and the remainder of the claims were argued, the Examiner mailed an advisory action on October 16, 2003, reaffirming the obviousness rejection of claims 36 and 39 through 42. By this preliminary amendment, original claims 36 and 41 have been amended, while new claims 44 through 46 have been added.

The device disclosed in the '709 patent includes a spin coating apparatus with an air flow adjusting unit **50**, and a void about a rotary spindle **1a** that together with conduit **30** defines an exhaust gas flow path to supply temperature-controlled air flow to lower surfaces of substrates being coated by the apparatus, all as shown in FIG. 2 of the '709 patent. A damper **40** is included in the inlet of conduit **30** to facilitate selective blockage of the exhaust gas flow path. The '709 patent does not disclose a second fluid conduit for fluids traveling from the region about the spindle and against the wafer support. Moreover, The '709 patent does not disclose the interaction of the exhaust gas flow path traveling through conduit **30** with another fluid in such a second fluid conduit.

By contrast, the heat regulating element **50** of the claimed device, as shown in original FIGS. 2 and 4, is made from a fluid conduit **58** that is disposed within a box-like frame **52**. The spindle **24** used to rotate the wafer support **70** passes through the center of the heat regulating element **50** such that a heat regulation void **55** is formed between the spindle **24** and the fluid conduit **58**. Therefore, the heat regulating element **50** functions as a heat exchanger between the exhaust gas that flows through the heat regulation void **55** and the fluid that flows through the conduit **58**. This stands in stark contrast to the complex active heat regulating system of the '709 patent (shown at FIG. 3 of the '709 patent) that remotely heats up or cools down the exhaust air flowing through conduit **30**. As such, the exhaust air of the '709 patent does not perform a heat

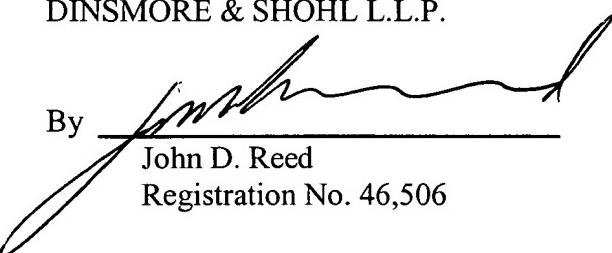
exchange function in the vicinity of the spindle between two disparate fluids. The device of the '127 patent, while describing a heat regulating flange disposed between a motor and a wafer support, does nothing to rectify the deficiencies of the '709 patent, as it too does not teach a fluid-carrying conduit disposed adjacent the exhaust air flow path such that it can interact with therewith.

Based on this significant difference in configuration, the Applicants respectfully submit that the rejection of independent claim 36 cannot be maintained. Moreover, claims 39 through 42 that depend from claim 36 are also patentably distinct over the teachings of the '709 and '127 patents, as they place additional limitations on the independent claim. Since new independent claim 44, like claim 36, recites features neither taught nor suggested by the '709 and '127 patents, the Applicants submit that it too (as well as the claims that depend therefrom) is patentable over the art of record. Accordingly, the Applicant submits that claims 36 and 39 through 46 of the application are now in condition for allowance.

The Examiner is encouraged to contact the undersigned to resolve efficiently any formal matters or to discuss any aspects of the application or of this response. Otherwise, early notification of allowable subject matter is respectfully solicited.

Respectfully submitted,
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